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## Deeper into Superficiality

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## Deeper into Superficiality

### Abstract

Science profoundly undermines our traditional self-conception, portraying humans not as categorically different than and superior to the rest of creation, but material things, the contingent product of vastly improbable natural processes. We are superficial features of the universe, not among its basic or necessitated constituents. For some, this threatens the conviction that we are made in God's Image. However, the author argues that God chose to create us but not to design us. The Christian faith, looking to God's nature and revealed purposes in creation, finds resources not merely to cope with the scientific erosion of the human self-image, but to integrate it into a richer story of our Creator and his creatures. By embracing our superficiality, we can better avoid the primal temptation to be like gods and instead focus on being God's, not gods.

### About the Author

An encounter with Dutch Calvinist philosophy led Dr. Wacome to pursue a master's degree in philosophy and write his thesis in epistemology. He continued his studies at Duke, where he earned a doctorate and explored metaethical theory in his dissertation. Since he started teaching, his interests have focused on the philosophy of the mind and the philosophy of science, particularly their bearing on the relation of scientific naturalism and the Christian faith. Wacome has a strong interest in theology and remains interested in metaethics, as well as political philosophy, particularly in its classical liberal and libertarian manifestations.

## Deeper into Superficiality

by Donald Wacome, Ph.D.

We belong to the surface of the world, and apply to it the classifications which inform and permit our actions...the meaning of the world is enshrined in conceptions that science does not endorse...conceptions that grow in the thin topsoil of human discourse. Our perspective on the world is not sovereign, but a by-product of the evolutionary process which created us. Its authority stands always to be usurped by the imperial ambitions of scientific theory.  
—Roger Scruton<sup>1</sup>

We human beings are a part of nature—supremely complicated but unprivileged parts of the biosphere.  
—Daniel Dennett<sup>2</sup>

### Introduction

When it comes to the image we human beings have of ourselves and our place in the universe, all that is solid melts into the rising waters of scientific explanation. Where once we could conceive ourselves as utterly unique, occupying a very special place in the scheme of things, it is increasingly difficult to sustain this in face of what science tells us about our origins and nature. To borrow Roger Scruton's trope, the news is that we are superficial. Or, as a 1970s song propagated by *National Lampoon* put it, you are a fluke of the universe. From an objective point of view the universe would look pretty much the same if humans had never existed. The impulse to seek consolation by way of ignoring, evading, or denying this is understandable. It is,

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<sup>1</sup> Roger Scruton, *Modern Philosophy: An Introduction and Survey* (London: Penguin, 1997), 240-241, 208.

<sup>2</sup> Daniel Dennett, forward to Ruth Garrett Millikan, *Language, Thought, and Other Biological Categories: New Foundations for Realism* (Cambridge, MA: MIT Press, 1984), ix.

perhaps, especially understandable for those of us who adhere to the ancient faith in Christ. Our confession that we are made in the image of God was for centuries articulated with the conceptual resources of a pre-scientific world. It is a challenge to integrate the image of human beings on offer from contemporary science into the biblical affirmation that we are God's creatures. Many persons of faith, seeing this as impossible, carry on a heroic but to all appearances hopeless struggle to safeguard something essentially human from capture in the nets of scientific explanation and thus preserve our image of ourselves. Many others, acknowledging that science has undone the ancient human self-image, abandon the Christian faith as a vestige of the past, inextricably committed to a false picture of what we are.

This essay expresses the conviction that neither course is correct, and that there is a route to a robust account of our place as God's beloved creatures that is not merely consistent with the scientific picture, but enhanced by it. I will conclude this essay by suggesting a route to this happy outcome. To follow it is to delve more deeply into our superficiality and to come, at last, to the heart of the Christian Gospel. First I will briefly enumerate some of the many ways in which science has brought down our exalted self-image.

### **Contingency**

The textbook history of early modern thought portrays the discovery that the Earth is one planet among others, orbiting a sun that is one star among countless others in a cosmos that has no center or privileged locations, as destroying the conceit that we occupy the center, and thus the most important, part of the universe. This is anachronistic, since the point of the ancient and medieval idea that modern astronomy overthrew is that the Earth occupies the bottom, and thus

the worst, part of the universe.<sup>3</sup> What was legitimately disconcerting was the parallel discovery of the vast size of the universe, with its implication that anything humanly imaginable is a negligible speck in it. Eventually, the daunting size of the universe was matched by the reaches of time. As Pascal said in his *Pensées*, “When I consider the short duration of my life, swallowed up in an eternity before and after, the little space I fill engulfed in the infinite immensity of spaces whereof I know nothing, and which know nothing of me, I am terrified. The eternal silence of the infinite spaces frightens me.”<sup>4</sup>

We may soberly point out that however much the immense span of space and time beggars the imagination, a thing's size and duration has no bearing on its value. However, we should be more impressed by our place in the abstract space of possibilities. You and I, dear reader, are contingent—nothing in the nature of things guarantees our existence—and we are incredibly improbable. That we exist, rather than any number of other possible people, is a matter of sheer chance. To exist at all is to have won the greatest lottery of all. In contrast, MegaMillions is a sure thing. Had any number of things gone even slightly differently in the past, we would not exist. Had a different spermatozoon reached the ovum at which it aimed, some possible, but forever non-existent, sibling would now exist instead of you. Buffeted by Brownian motion, which is due to apparently inherently probabilistic quantum mechanical events, a spermatozoon's trajectory, and thus conception, is a chancy process. And, of course, who is conceived depends on the behavior of prospective parents, not just in the final intimate

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<sup>3</sup> In contrast, the new science portrayed the heavens as having no place for heaven, an abode of God, a real problem for traditional belief. See Robert Jenson, *Systematic Theology Volume I: The Triune God* (Oxford: Oxford University Press, 1997), 202.

<sup>4</sup> Blaise Pascal, *Pensées*, No. 205-206, trans. A. J. Krailsheimer (London: Penguin Classics, 1995).

moments, but earlier in their lives. Further, their getting together to bring you into being was in turn dependent on an incalculable number of earlier actions and events that could have been otherwise. I have mused on the fact that if Prime Minister Tojo and Chancellor Hitler had not opted for war with the United States, my maternal grandfather would not have been transferred from Cleveland to Boston for war work, with his daughter in tow, who there met and married the man who became my father. So thanks Tojo and Hitler! Had they behaved themselves, there would be no me. For reasons that I cannot conceive my mother once informed me that I was conceived while my multitasking father was listening to a Red Sox game on the radio, causing me to realize that if the players made a few different choices, the pace of coital events would have gone differently and not me, but some possible but never actual sibling, would have taken my slot in existence. So thanks to the team!

Some of my fellow Christians will find this implausible, at odds with the idea that each of us was specifically intended by our Creator. But the cost of this belief is high: either the creation is governed by deterministic laws so that whoever eventually exists, what happens to them, and what they do is guaranteed by the initial state of the universe and those laws, or God more or less constantly intervenes to ensure things go according to plan. So, say, I exist only because in June 1951 Ted Williams at the last minute changed his mind and threw a fastball, rather than a curve, to the Brooklyn Dodgers' batter, and Williams made that choice because it was in the cards from the beginning of the universe, guaranteed by the laws and initial conditions. Or I exist because God miraculously intervened to nudge Williams into deciding on the fastball. Neither causal determinism nor relentless divine intervention is easily reconciled with human responsibility. I may feel like an inevitable feature of the universe, but in reality my existence was far from a sure

thing.<sup>5</sup>

The same improbable contingency applies to the human species as a whole. As Stephen J. Gould's often said, if the tape of life's development were rewound and replayed the result would be different; other species would exist.<sup>6</sup> The existence of humans was far from inevitable, but as dependent on unlikely sequences of earlier events as the existence of each human individual. Species perpetuate themselves for long stretches of time, but they are “frozen accidents,” not kinds called for in the nature of things. Reaching further back in time, the same is true of the earth, the sun, the solar system, and the Milky Way. Had things gone slightly differently earlier in the history of the universe it would contain other possible galaxies, star systems, and planets. At the beginning, all the inevitabilities were general: the universe was more or less sure to give rise to galaxies, stars, and planets of some sort, but the specifics were left to chance.

Viewed from the impersonal perspective of the universe, we look like afterthoughts. Contemplating this leads to a kind of metaphysical vertigo. As the Psalmist wrote, “We are fearfully and wonderfully made” (Ps. 139:13)

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<sup>5</sup> This is one good reason among others to eschew an individualistic reading of Ephesians 1:4, where we read that God chose us before the foundation of the world.

<sup>6</sup> As my colleague Randy Jensen has pointed out, Gould's metaphor is inapt: if you replay a tape you get the same result every time. Of course, as this journal's editor notes, tapes break or get worn down so the original is distorted. But re-played tapes, in contrast to evolutionary history, are not subject to accumulating random perturbations that lead to radically different results. As worn out as it might be, my old VHS of *It's A Wonderful Life* does not replay as *Bad Santa*.

## Materiality

Most humans believe that they are not merely their bodies, but that they contain an immaterial part.<sup>7</sup> They see this essential component, the mind or soul, as by nature immortal, continuing to exist after the body's demise, its fate determined by one's behavior prior to death. This conviction answers to our deep-seated desire to transcend the material world and its vicissitudes, as well as our innate insistence that each of us finally get what he or she deserves. The human mind is mysterious to itself, so denying it its place in the physical world and projecting it into another realm was, for millennia, reasonable. It no longer is. Science leaves no serious doubt that the human mind is the functioning, embodied, socially situated brain, that the seat of our cognitive and affective lives is the brain's neurocomputational circuitry. Ironically, it explains the intuitive plausibility of the mind being distinct from the body as a by-product of the brain's cognitive architecture: the information processing module that generates beliefs about biological life and the module that generates beliefs about other minds do not communicate. We naturally continue to ascribe mental properties to persons after we know their bodies are dead. The human brain is the most complex object in the universe that we know of, and much of its workings remain to be explained. But the evidence that mind is a product of brain function is overwhelming. Here science accords with ordinary experience: we know, for example, that consuming gin in quantity deranges reasoning and moral judgment, and that a sharp blow to the

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<sup>7</sup> Despite its prevalence in folk-theology, the notion that the Bible underwrites a dualist conception of human nature lacks a firm foundation. See, e.g., Joel Green, *Body, Soul and Human Life: The Nature of Humanity in the Bible* (Grand Rapids, MI: Baker Academic, 2008). Still, we must acknowledge that the Christian materialist faces significant challenges, e.g., providing an account of the identity of persons through time that allows for a gap in existence between death and resurrection, and an account of how Jesus can be fully God yet not exist between the first Friday and the first Easter.



head can cause loss of consciousness. Such phenomena are incomprehensible on the assumption that reasoning, moral judgment and consciousness itself are activities of an immaterial mind, not the brain.

Some believe, or at least hope, that we must resort to an immaterial mind to explain subjectivity, that mere material things cannot possess consciousness and for this reason humans are fundamentally different from all other creatures, in our essentials beyond the grasp of greedy science, invisible to its objectifying lens. This is unsustainable in light of what's obvious with no help from science. A cat, for example, feels pain when you step on its tail. It has a sensation, which is a state of consciousness. Thus a physical object can be a subject. The alternative is to claim that cats, and all other non-human animals, are mindless automata, or that they possess immaterial souls. We lack a good explanation of how a material thing can be conscious, but this does not detract from our knowledge that some do. The assumption that the mind is the brain either already explains, or reasonably promises to explain, a great deal about the mind, although subjective experience remains beyond the current reach of science. However, this must be seen in light of the fact that those who say that the mind is a non-physical entity also have no explanation of how it can be conscious, as well as having no explanation of anything else we know of the mind.

Acknowledging that we can understand ourselves only in rudimentary and fragmentary ways, we are tempted to conclude that we must be truly wonderful, mysterious beings. The alternative, which deflates our self-image, is that we must not be as smart as we thought we are.

## **Responsibility**

The humbling realization that we are material creatures has pervasive implications for our image of ourselves. Perhaps most challenging is what follows from our being fully embedded in the natural world of cause and effect. All that transpires in the mind, including every decision, is an effect of natural causes. Whatever freedom of choice and moral responsibility we have must be consistent with this basic fact about our material nature. We cannot be the *ultimate* originators of our choices and actions: they lie along chains of causation that pass through us, back, ultimately, to the beginning of creation. We do not initiate them. Unlike God, none of his creatures is a “first cause,” “an unmoved mover.” It is widely believed that such causation precludes genuine freedom. If so, we must settle for freedom of a lesser sort, the quotidian freedom and responsibility we ascribe to other persons and ourselves so long as one's actions are caused by one's choices, and one's choices are in turn caused by one's own reflectively examined beliefs and desires. Human beings can be responsible for what they do, but not in the ultimate sense some envision. Our choices are caused by our reasons, what we want and what we believe about how to obtain it, but we cannot choose what to want or what to believe. We did not create ourselves. As moral agents, we do not stand outside the world, acting upon it, but can at best act with some approximation of rationality within it.<sup>8</sup>

## **Knowledge**

From the ancient Greeks until midway through the past century, those who thought about

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<sup>8</sup> My view is that the freedom and responsibility we can reasonably care about is compatible with everything about us being causally determined, but not if there is a creator. If this is a deterministic universe created by God, then everything we do is not only caused by, but foreknown by and intended by God, and thus we are not free and responsible. In a universe created by God, creatures' freedom requires indeterministic causation.

such matters aspired to knowledge that had an absolutely certain foundation. To truly know, we must be beyond not only actual and reasonable doubt, but beyond any possible doubt. Some careful process of reasoning could, it was hoped, reward us with absolute certitude. Escaping the distraction of the body with its desires and sensations was a prerequisite for success in this quest for knowledge. Human reasoning, and the knowledge it creates, was qualitatively precisely like God's, differing only in its scope: we are not omniscient. It afforded a direct view of reality in itself untainted by the possibility of error or parochial perspective. The mind's materiality renders this high view of our capabilities implausible.

The account that emerges, shaped by the realization that the mind is a brain crafted by mindless natural selection, not an immaterial substance engaged in pure reasoning, portrays human knowledge as a product of the brain's sensory connections to the rest of the world. Knowledge is belief that is true and which is caused by a reliable process. We know by seeing, for example, because light impinging on our eyes initiates a cascade of neural causes and effects that cause the brain events that are visual sensations, and they in turn cause us to have beliefs about what lies outside the mind. This process is reliable, but it is not infallible. It sometimes gives rise to false beliefs and we think we know when we don't. We can investigate the causal processes that cause our beliefs, either confirming or weakening our confidence in them. However, all such inquiries are local, necessarily carried out against a background assumption of the general reliability of the mind's sensory and reasoning mechanisms. Scientists who explore vision, or memory, or reasoning itself cannot dispense with reliance, however cautious, on their ability to see, remember what they see, and to reason about it. We have no place to stand from which we can validate our means of knowing as a whole, from the outside. We *could* be

completely deceived. We cannot avoid trusting our native capacities.

What we are able to know by way of scientific investigation of our origins chastens the impulse to exalt our capacity to know. The brain is the product of eons of natural selection, taking its final shape in the last few hundred thousand years on the African savanna. There, our ancestors' minds were adapted by natural selection for life in small hunter-gatherer groups. What mattered for reproductive fitness there was not the capacity to obtain knowledge of the world as it truly is, but by economical means to acquire beliefs that were useful for surviving long enough to raise children. Various lapses in our reasoning today are explained by appeal to the fact that our minds are essentially similar to the stone-age minds of our ancestors. Why do human beings find it obvious that heavy objects fall faster than light ones? Because this false belief works well enough in a world where air resistance slows the descent of light objects. Why do we like the taste of salty, fatty, and sweet foods so much, when eating them in quantity is bad for our health? Because in the ancestral environment such foods were hard to come by, necessary for nutrition, and obtained only by those with a strong motivation to make the effort. Why do we have difficulty believing that the misfortunes that befall us are matters of chance, rather than due to malicious unseen actors, human or divine? Because when constructing necessarily imperfect mental mechanisms to detect threats, selection favors false positives, which are merely inconvenient, over false negatives, which can be fatal. Human beings are innately subject to various cognitive and perceptual illusions because our minds are the result of blind evolution, not of intelligent design.

Nowhere is the gap between what we are and how we have traditionally conceived ourselves greater than when it comes to self-knowledge. We are, to a startling degree, “strangers

to ourselves.”<sup>9</sup> Experimentation reveals that human beings lack access to the unconscious sources of their desires and preferences and, when called upon to explain them, often confidently confabulate reasons for them. We are reliably moved to act by factors we see as having no motivational force, and even by factors of which we are unaware. A well-known example are ethnic and gender biases which we are sure we do not have, yet which scientific study brings to light. Clever experimenters easily manipulate us into doing things we regard ourselves as freely doing. Again, when asked to explain ourselves, we indulge in fiction. Our powers of reasoning are more generally deployed for rationalization, defending convictions we hold not as conclusions, but as unconsciously held presuppositions. Actual honest reasoning is a hard-won achievement, not something we do naturally.<sup>10</sup>

We have long supposed that we possess a special faculty for knowing what we want and believe, and that introspection infallibly informs us of the contents of our own minds. If I sincerely assert that I believe cats are vicious, I might be wrong about cats, but how could I be wrong in believing that I believe this? Yet a large and converging body of evidence points toward the conclusion that much of the content of our minds is knowable to us only in the way we know what goes on in other minds: by interpreting empirical evidence. We employ a single fallible capacity for “mind reading” for our own minds and those of others.<sup>11</sup> Similarly disconcerting results appear in the study of perception. We imagine that we see what is before our eyes, but

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<sup>9</sup> Timothy D. Wilson, *Strangers to Ourselves: Discovering the Adaptive Unconscious* (Cambridge, MA: Harvard University Press, 2002).

<sup>10</sup> See Hugo Mercier and Dan Sperber, *The Enigma of Reason* (Cambridge, MA: Harvard University Press, 2017).

<sup>11</sup> See Peter Carruthers, *The Opacity of Mind: An Integrative Theory of Self Knowledge* (Oxford: Oxford University Press, 2011).

those of you who have encountered the “invisible” gorilla on the basketball court, or examples of “change blindness,” know this is not true.<sup>12</sup> Perception supplies a highly edited and far from neutral description of the world, not a transparent window on whatever happens to be there. We often see what we expect to see when it's not there and we fail to see what is there when we do not expect to see it. Colorless, invisible photons strike the eyes, triggering chemical events in nerves that initiate multiple levels of extraordinarily complex computation, culminating in the conscious representation of a world of colored, three dimensional, moving objects. This process is profoundly influenced by what we already believe and care about. Seeing what's in front of us is more like writing the great American novel than like being a little person—a homunculus—disinterestedly watching an internal television screen.

Current science describes the brain as the mind in virtue of its computational powers. The intrinsically meaningless states of the brain become meaningful thoughts because of the causal roles they play. A state of one's brain is an *idea*, and an idea of a *cat*, because it is characteristically caused by the presence of cats, and in turn it characteristically causes behavior appropriate to cats. The mind is not, however, an all-purpose computer, like the one on which I am writing this, but an interconnected set of dedicated, special-purpose information processors. Each is natural selection's solution to a problem posed by the ancestral environment. Each receives information from the senses or from other modules, and each outputs information to other modules or to the muscles that move us. By this means the brain navigates the person as a whole through the natural and social environment. We lack conscious access to much of this

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<sup>12</sup> Christopher Chabris and Daniel Simons, *The Invisible Gorilla: How Our Intuitions Deceive Us* (New York: Crown, 2011).

computation. For example, the brain parses the continuous stream of sound speakers produce into distinct phonemes and morphemes, then into grammatical sentences, and we finally hear intelligible speech. But we have no direct knowledge of how we do this, just as we have no knowledge of how our intentions to speak cause the lungs, vocal chords, tongue, and mouth to produce our own continuous auditory stream in response.

The mental modules that comprise our minds interconnect in various ways, but not all possible interconnections exist. The mind's modularity involves a degree of encapsulation: some modules do their work without sending their output to other modules that could have put it to good use. As in the example of the intuitive plausibility of the non-physical mind, one part of the mind does not know what another part knows. A striking example of this are optical illusions that persist even after we understand their causes and know that how they make things appear is not how things really are. What one knows is not communicated to, and thus does not modify, how things look to us.

Many now seek to explain innate human religiosity as a by-product of our cognitive architecture, a result of the encapsulation of some of our information processing modules. This is in a sense an evolutionary explanation, but it does not even dignify our tendency to belief in unseen agents such as gods, demons, or the spirits of ancestors as an adaptation, a response to reality. It's an accident of our brain's evolved architecture.<sup>13</sup>

Somehow, the output of various modules binds together, so, for example, one has a unified experience of seeing and hearing the fire truck go by. But the mind falls far short of being

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<sup>13</sup> See, e.g., Pascal Boyer, *Religion Explained: The Evolutionary Origins of Religious Thought* (New York: Basic Books, 2001).

the unified whole it long imagined itself to be. The verbalizing parts of the brain engage in ongoing self-description, constructing a more or less coherent narrative, but this *self* is an incomplete and only somewhat accurate gloss on what we really are. Its relation to what goes on in the depths of the mind/brain is analogous to the relation of your computer's graphical user interface, what you see on the screen, to the software and hardware invisibly at work inside. Developing a self that reveals to us what we really are, and thus being a principled, consistent agent in the world, is an ideal we approximate only with effort.

### **The Human World**

At another level, the limits of the evolved mind are no less profound. Our powers of reasoning and imagination, and the sensory capacities they rely on, evolved to detect what's going on in a narrow range of reality. Our sense organs are sensitive to only a fraction of the possible sources of information in the universe: “visible” light is a small slice of the electromagnetic spectrum, and hearing detects only a relatively small range of sound frequencies. Most of what goes on around us is hidden. Deeper knowledge of the world must be indirect, accomplished by way of instruments that supply a second-hand experience of what is out there.

Human beings are middle-size things, made for coping with a world of things on a comparable scale. Our minds are not naturally equipped to deal with the unimaginably small, the realm where the behavior of atoms and their components determine what goes on in the world we experience. Nor are they naturally equipped to deal with the unimaginably old or large. We are epistemological Goldilocks, lacking natural access to most of reality. The world as we



experience it is not too large, not too small: it is the *middle world*.<sup>14</sup> Reality is many orders of magnitude smaller, larger, and older than what we can experience. The observable universe is 13.76 billion years old, and its diameter is 28 billion light years, but it is still expanding, once having been infinitesimally small. The implication of special relativity, that whether two events are simultaneous depends on frames of reference, and general relativity's implication that space has curvature, is deeply at odds with our normal experience, as are the phenomena quantum mechanics mathematically describes. It used to be said that only a handful of people in the world understand relativity. It is true today that no one understands quantum mechanics; at best we know how to do the calculations that enable extremely precise and accurate predictions about what our instruments will detect and which sustain our electronics technology. Knowledge of such matters does not come easy. It is the reward for scientific work, demanding the use of our evolved native faculties in ways for which they are not adapted. It is not a surprise that the scientific picture of the world is in so many ways beyond what we can imagine, at the edge of what we can comprehend. To all appearances, we are not in a world that was made for us, one for which our capabilities are well suited to understand.

Perhaps the hardest thing science calls upon us to believe is the extent to which what seems to belong to a world independent of us is actually not a feature of the world, but what we project upon it. Color is the outstanding example. Looking out my office window, I see a dean's midnight blue BMW in the parking lot. We know that the car's color is not something adhering to its surfaces. The molecular microstructure of the painted surface reflects light at a particular

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<sup>14</sup> Mark Haw, *Middle World: The Restless Heart of Matter and Life* (New York: Macmillan, 2007).

frequency. The reflected light arrives at my eyes and by the complicated route referred to above, causes me to have a visual sensation. My mind represents a blue BMW; it represents that physical object as blue. In an obvious sense, the car is not *really* blue: the light-reflecting molecules in the paint are not themselves blue; a molecule has no color. We say the car reflects blue light, but in an obvious sense this is not true either: nothing blue streaks from the car to my eyes. All that is there is invisible electromagnetic radiation, something essentially no different than a radio wave, not the kind of thing that can be blue. That leaves brains like mine as the place to look for blue in this world. My sensation of the blue car is identical to some state or event in my brain, yet no neurosurgeon who observes it will find it to be blue. There might be something blue in my brain, but if so it's a coincidence or a sign of something having gone wrong. This is unsurprising: a sensation is a mental representation, and we don't reasonably expect a representation of a thing to have the properties the thing has. We should not expect the brain's representation of something as blue to be blue, no more than we expect the linguistic representation “blue” to be blue or the word “car” to have wheels. Reviving the immaterial mind would be of no use here: surely no immaterial thing has something blue in it. Colors, after all, are supposed to be properties of two-dimensional surfaces, something no non-physical entity has. Reality has no place for the blue to be. Colors are ways we represent things, not characteristics of the things we represent. We represent the world as having them although they do not. This is not to say that this is sheer fiction. There really is a category of objects that under certain conditions cause us mentally to represent them as blue. It is, though, a highly gerrymandered class of things. There is no simple correspondence between the frequency of light reflected and the representation of a particular color. The BMW will look blue under a wide range of lighting

conditions, with different frequencies causing the same sensation. And objects that reflect the same frequency will be represented as having different colors. The picture of reality with which natural selection has endowed us is no realistic rendering or perspicacious map. Yet it is not imaginary: it is grounded in the reality that *is* really there and with which are ancestors had to cope in order to become our ancestors. Natural selection can track only what exists. It can detect recondite patterns that emerge from the world's complexity and make minds that spontaneously represent the world thus patterned with simple identifying properties. Various items might have little in common except that a creature's responding to them in a particular way enhances its fitness. In that case natural selection can devise minds for which it is enormously useful to project a simple, homogeneous property upon disparate objects. That the target objects do not have, and could not have, that property in any strict sense is no impediment. The mind does a good job of representing things as having properties they could not possibly have; think of your visual representation of an Escher engraving of a physical scenario that could not exist in reality.

What's true of color is true of a great deal of what makes our world meaningful and valuable. We inhabit a world replete with equally superficial qualities. Things are sweet, sour, cute, beautiful, ugly, disgusting, interesting, funny...just insofar as humans have evolved to categorize what they experience in these ways. In David Hume's words, we “spread” these qualities upon objective reality. The illusion that they are simply *there*, characterizing things as they are in themselves and independent of us, is not easily overcome. To be human is to be a superficial creature inhabiting a superficial world.

A well-received theory of human moral psychology explains our moral concepts,

sentiments, and behavioral dispositions as adaptations to social life.<sup>15</sup> The reasonable interpretation of this theory portrays moral properties as projections upon choices, actions, and social situations we have categorized in ways that map not an underlying, fully objective reality, but what is, or is not, conducive to social life and the reproductive fitness it makes possible. To be human is to inhabit a realm of moral meanings, but it is a superficial realm. The moral truth is, for the individual and for societies, inescapable but it is not ultimately objective, grounded in a reality independent of us. It is relative to the human species.

At the limit, human consciousness itself might be understood along these lines. Rather than being a property that baffles science when matter is configured in certain complex ways, perhaps it is one more property that we project upon other persons and animals, as well as upon ourselves. It seems so mysterious and resistant to being located in the physical world because, like color, it's a property nothing could literally have. If so, being conscious is akin to being blue. On this account, being conscious is to be able to project this property upon oneself and other things. Along with the rest of our capacities to categorize and characterize things, it is explicable as a matter of cognition, realized in the brain's neural circuitry.<sup>16</sup>

If the workings of the mind, including its subjective experience, its moral nature, and even its religiosity yield to scientific explanation, little or nothing uniquely human escapes the net of scientific explanation and we stand revealed as one kind of material thing among others,

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<sup>15</sup> See, e.g., Robert Wright, *The Moral Animal: Why We Are the Way We are - The New Science of Evolutionary Psychology* (New York: Pantheon, 1994).

<sup>16</sup> For explorations in this direction see Daniel M. Wegner and Kurt Gray, *The Mind Club: Who Thinks, What Feels, and Why it Matters* (New York: Penguin, 2015), Michael S. A. Graziano, *Consciousness and the Social Brain* (Oxford: Oxford University Press, 2015), and Keith Frankish, ed., *Illusionism as a Theory of Consciousness* (Exeter, UK: Imprint Academic, 2017).

made of the same stuff and governed by the same laws as everything else. Old ideas about deep categorical differences between humans and the rest of nature are exposed as illusory.

Finally, at the most basic level, we should note the possibility that time and causation, inescapable features of the world of human experience, are not fundamental features of physical reality. This is, in fact, a widespread view in some quarters.<sup>17</sup> As much as being funny or being blue, they might be superficial, artifacts of our ways of representing a reality that at bottom is unimaginably different from the world as we conceive it, a world we can describe only at a far remove, not in its native language. Our construal of what is may be a very long way from the way things really are.

### **Irreducibility**

Many on the current scene look to the fact that the human mind cannot be reduced to the workings of the brain as a reason to see ourselves as unique among creatures, even as possessing a kind of transcendence of the material world. I believe this is a mistake. Our irreducibility does nothing to make us special. It is no surrogate for transcendence. It is in fact another reason to acknowledge what Roger Scruton points out in the quotation at the start of this essay: we belong to the world's surface.

A half-century ago, the reductionist project seemed feasible. The brain is the thing that bears mental properties, it is the mind, and the brain is composed of cells, which are composed of molecules, which are composed of atoms, which are composed of the elementary particles of

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<sup>17</sup> Plato in the *Timaeus*, and much of the philosophical and theological tradition after him, thought of this world as the “moving image of eternity,” temporal 'becoming' in contrast to timeless being. I conjecture that the opposite is closer to truth: created reality is temporal only in a derivative, superficial way and in its nature timeless, unchanging, static, a material image of its Creator, who is ever active, ever changing, always becoming more fully himself.

basic physics, so, it seemed, we ought to be able to say anything that is true about the mind using only the austere vocabulary of physics. We should be able to replace, say, “Marvin is in pain” with some complicated statement deploying only the concepts and categories of neuroscience. That neuroscientific statement would in turn be replaceable with some even more complicated statement of chemistry. And that chemical truth would, at last, be replaceable with some enormously complex statement using only the austere vocabulary of physics. We should be able to refer to the fact that Marvin is in pain directly referring only to the doings and relations of quarks and electrons. These reductions were, of course, said to be possible only in principle, not in practice, but since the people advocating this grand reductionist project were philosophers, the practical impossibility did not dampen their enthusiasm. What did eventually extinguish the enthusiasm, and the project itself, were rapidly accumulating theoretical objections that were relatively quickly recognized as insurmountable. Beyond the (only qualified) success of the reduction of chemistry to physics, nothing worked. One simple example: if pain is identical to such and such a human brain state, then cats, kangaroos and hypothetical Martians and artificial intelligences cannot be in pain, an implausible implication. Mental concepts like *pain* do not reduce to neuroscience, let alone to basic physics. Pain cannot be defined in terms that refer only to neurons, molecules, atoms, or quarks.

Nowadays many seize on this result to conclude that the human mind must be something unique in the cosmos, not a mere physical thing, not a mere arrangement of the things known to physics, and thus safe from the rising tide of scientific explanation. But this is a mistake. Most of the things in the world share this irreducibility. A particular pizza, for example, is nothing but a particular set of quarks and electrons, yet we cannot define what it is to be a pizza using only the

concepts and categories of physics.<sup>18</sup> Any number of ways of configuring the elementary physical things gives us a pizza; each is sufficient for a pizza to exist, but none are necessary, for there are too many ways to be a pizza. Pizzas, like minds, are “multiply realizable.” There is no smooth mapping of the concept pizza onto the physical world. A pizza is one of the things we get when we assemble some of nature's fundamental constituents—whatever they turn out to be: electrons, quarks, strings, branes, or things we do not know about yet—in certain ways. Pizzas, along with most of what we know and love, belong to the surface of reality. It is not one of the fundamental things. Nor is it even a thing that can be defined in terms of the fundamental things. It exists only as a result of history and accident, a highly contingent and improbable arrangement of the world's basic constituents. Pizzas are superficial, as are the human beings that eat them. Being irreducible makes one ontologically mundane. “Non-reductive materialism” avoids no problems that reductive materialism leads to. Dwelling on irreducibility is not the route to celebrating human uniqueness or to denying that we are nothing but material things.

### **Embracing Superficiality**

The too familiar hubris of secular humanity notwithstanding, modernity when informed by science has been a course in humility, an ongoing erosion of our pride in what we are, of our sense of categorical superiority, the conceit that we stand above the natural world. Chastened as our self-understanding is, the human difference is not to be denied. Among the created things we know, we are the only persons. We alone exhibit the conjunction of consciousness and intelligence that makes for self-consciousness and thus personhood. Persons alone possess moral

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<sup>18</sup> In philosophy talk any pizza is *token-identical* to a particular configuration of atoms, etc., but pizzas are not *type-identical* to, and thus not *type-reducible* to, the types of physics.

agency, the freedom and responsibility of the kind available to material beings. We alone possess the power of language that makes possible civilization and with it the science by means of which we can know something of our nature and origins. But all this is to be explained in ordinary, scientific terms, as are the characteristics of all other material things. As impressive as human persons may be, at least to themselves, they exist, and have their consciousness, intelligence, and all that entails, only because the chancy processes of biological evolution have assembled nature's basic constituents in this way. We are material, evolved, contingent things of a rather remarkable sort, but we are material, evolved, contingent things, not something more.

Many find all this either true and tragic or a deplorable falsehood, a denial of our elevated status. Christians in particular may find the image of humankind science delivers as utterly foreign to our confession that we are God's beloved creation, called to serve as his image in creation. In the remainder of this essay, I challenge this response, offering the beginning of a strategy to incorporate the scientific image into a compelling Christian account of human nature and our place in the universe.

The first, and most important, move is to step back from ancient assumptions about how God must have created, and thus what we, and the world, must be like, and to ask the simple question: given God's revealed purposes in creating, how might he have created? A wise creator will, of course, choose means well suited to his ends. In Christian perspective, God's aims in creating are not inscrutable. The Triune God, an everlasting community of loving persons, freely chose to reach beyond himself, bringing into being persons he can invite to share in his ongoing life and work. This need not be God's sole purpose in creating, but it is the one revealed to us in Jesus Christ.



Given this divine creative intent, we ask about the most likely means. One possibility is that God would *design* the created persons he calls to fellowship with their Creator. That is, the creatures that exist exist, and have the characteristics they have, because this is what God specifically intended. This could be accomplished either by direct divine action or indirectly, by establishing the world's initial conditions and authoring deterministic laws that guarantee that in due course precisely the persons God intended to exist come into existence. The alternative possibility is that God chose to create persons without designing them. He established the initial conditions and authored laws that are not deterministic, leaving an element of chance in nature's course. Thus, whoever eventually comes about is caused by, but not specifically intended by, God. The created persons' existence answers to God's general intention that there be created persons, but not to a specific intention as to the kind of creatures created.

Assuming God has the power and wisdom to do either, we should conclude that it is far more reasonable to believe that he chose to create persons by chancy means, rather than designing them. A telling analogy is the consideration of prospective human parents and the way they choose to produce a child. Perhaps in the future, thanks to genetic engineering, parents will have the option to design their children. The child thus created will have exactly the characteristics her parents intended her to have. I submit that this method is incompatible with the goal of bringing into existence a person truly distinct from oneself, someone who can freely choose to enter into, and grow in, a personal relationship with the parents. Such a relationship depends upon the child's “psychic distance” from the parent. A designed child would be incapable of conceiving herself fully as a person in her own right, rather than a mere extension of the parent. One can have a genuine personal relation only with the *other*. In Martha Nussbaum's

words, “Love requires not only the recognition of the object’s separateness, but also the wish that this separateness be protected.”<sup>19</sup> Persons must be distinct from one another if they are to be in mutual relations of love and trust. Further, on the assumption that the choices a person makes in the course of her life are decisively shaped by her genetic endowment, the designed child has, at best, an impaired freedom.<sup>20</sup> Her reasons for choosing, and the choices she makes, are what her designers intended them to be. A human being’s major personality traits, for example, the strength of the disposition to be altruistic, are highly heritable and encoded in the brain’s circuitry.<sup>21</sup> Someone who realizes that her altruistic impulses were chosen by her parents is in a state of self-alienation, neither able to identify fully with them or to escape them. No matter how wise and good the parents are, it is not the appropriate way to proceed if their aim is to have a child with whom they can personally interact.

Wise humans might design their homes and maybe even their pets, but they would not design their offspring. They would do things the old fashioned way, switching on the radio for the game and letting nature take its chancy course to whatever surprising results ensue. The wise God who seeks created persons who can be in communion with him would likewise eschew design. If the scientific account of human origins is right, God chose to create us but not to design us. Science confirms our theological expectations. God did not create us by miraculous

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<sup>19</sup> Martha Nussbaum, *Upheavals of Thought: The Intelligence of Human Emotions* (Cambridge: Cambridge University Press, 2001), 225.

<sup>20</sup> This is dramatically illustrated by the fact that the choices monozygotic twins raised separately make over the course of their lives are more similar than those of fraternal twins raised together.

<sup>21</sup> J. Phillippe Ruston, David W. Fulker, Michael C. Neale, David K. B. Nias, and Hans J. Eysenck, “Altruism and Aggression: The Heritability of Individual Differences,” *Journal of Personality and Social Psychology* 50, no. 8 (1986): 1192-1198.

intervention or by deterministic secondary causation. We are the products of a long, quite improbable, natural process with an only generally intended outcomes: Darwinian natural selection in a world governed by indeterministic fundamental laws. This indicates neither divine non-existence nor divine indifference.<sup>22</sup> It reveals the loving intention that there be persons who are not God, but who can freely receive the vocation of serving as God's image in his creation.<sup>23</sup> If this is true, the longstanding quest for signs of design in the world is misguided. Because it is the creation of the God of the Bible, the God who in abject humility came among us as one of us, not of some imagined generic deity committed to command and control, we should not expect to discover design in nature. The design is found only at the most general level, at the most primeval initial conditions of creation and in the choice of fundamental laws. The products of such a process are, of course, material things, not transcendent beings but part and parcel of the physical world. We are God's, not gods. Contingently and improbably constructed by blind natural processes the Creator devised, we are, as we have seen, creatures that inhabit the shallows of reality. Paradoxically, this very superficiality is the sign of our special status, one due not to the kind of creatures we are but to what our Creator does on our behalf.

To conclude, I will speculate further. As science has invaded the human domain, Christians have been alert to the possibility of ignoring, denying, or undermining what is special about humans, to the risk of regarding us as more like animals and less like God than we really

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<sup>22</sup> Nor is it deistic, as some might suppose. God refrains from controlling the processes that bring persons into existence because his aim is to intimately involve himself in their lives.

<sup>23</sup> In accord with most recent scholarship, I assume that the idea of our being made in the image of God has to do with our vocation to represent God in creation, not with any real or imagined similarity to God. Of course, this presupposes that human beings do resemble God in some ways; presumably only a person can hear and respond to God's call, although the ways in which human beings are persons is radically different than the way God is a person.

are.<sup>24</sup> Such concerns are sometimes in order. However, the concern more deeply rooted in the biblical tradition is the danger of human pride. The primal temptation was not to be more like the animals, but to be like God (or gods); it was to deny our status as creatures. We are more likely to foolishly compliment ourselves than to adopt too low an estimation of what we are. The tradition, both Christian and secular, has thought of humanity as the crown of creation, the most impressive of God's creatures. In light of how our Creator has revealed himself, we should have doubts about this.

God did not have to create; he would have been no less good had he not created. But he freely chose to create and to bring into being persons other than himself. This reaching out to the other manifests the fact that God is love. God's creating persons distinct from himself is not necessitated by his nature, but it is profoundly in keeping with it. The biblical witness deepens this, portraying God as not just graciously reaching out the other, but reaching down as far as he can. Those God calls have no reason to imagine they are especially worthy, elect in virtue of their merit, moral, metaphysical, or whatever. On the contrary, the God we encounter in Scripture reaches down to the last and least. He exalts the lowly. Consider the remarkable text (Deuteronomy 7:7) in which God deflates Israel's pride at being his elect people, advising that he chose them not because they were a great, but the least, of nations. This manifestation of God's character extends onward: you and I are privileged to bear witness in faith to the God who was in Christ not because we deserve this high honor; it is a gift given with rather shocking disregard of our merits, if we have any. And, I suspect, it extends backward to creation: God chose

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<sup>24</sup> C. S. Lewis is a familiar example in, e.g., *That Hideous Strength* and *The Abolition of Man*.

humankind to be his image, to be his witness in the world and to share in his work, not because we are the greatest of creatures, but because we were as far down as he could reach.

There were probably other options. God's creation having given rise to exactly one kind of personal creature is too close to none. The laws and original state of the creation would have made inevitable many persons of many kinds. Given that we are the ones God called as his image we should infer not our superiority among creatures but the opposite. Humans may be the Israel of the universe. A proper Christian humility sees our vocation as *imago Dei* not as a sign of our superiority, of some similarity to God, but of our being the most problematic of created persons. The universe might be replete with better, wiser, more deserving created persons that God passed over in electing humans as his image. We might be as close as anyone can get to the boundary between what is and is not a person.<sup>25</sup> This, at least, could explain a lot. Eliciting free and genuine response to God's call from the likes of us might be a prolonged and costly undertaking. It might even require that God, always having intended to become Incarnate, at last delivers these wayward creatures by letting them do their worst, subjecting him to a humiliating death as punishment for blasphemy and sedition for challenging their virtue, pride, and power. It might mean that while God could have been the incarnate king from the beginning, he willingly became the crucified savior. God reaches down to the very depths of hell to reclaim the creatures he loves. In this alone, not in the kind of things we are, lies the glory of being human. Daniel Dennett is right to point out that we are not privileged in the way our traditional image of

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<sup>25</sup> Technically, humans can be regarded as the third species of chimpanzee, along with the bonobos and common chimps. Only a relatively small number of (mostly regulatory) genes separate us from creatures who are a lot like us yet not persons.

ourselves suggests. But such privilege is insignificant in contrast to the privilege of being created by, loved by, and saved by God. Looking more deeply into our superficiality enables us to see more deeply into the meaning of our faith.<sup>26</sup>

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<sup>26</sup> Some of this essay’s themes are developed in greater detail in my *The Material Image: Reconciling Modern Science and Christian Faith* (Lanham, MD: Fortress Press, forthcoming).